EG&G ROCKY FLATS

000013666

INTEROFFICE CORRESPONDENCE

DATE: October 6, 1993

TO: D. L. Schubbe, Remediations Projects Mgmt., Bldg. 080, X8709
M.D.S.

FROM: M. D. Schreckengast, Industrial Hygiene, Bldg. T452G, X6790

SUBJECT: BERYLLIUM SMEAR RESULTS FOR BUILDING 883, ROOM 104 - MDS-013-93

This letter details results of the beryllium smear surveys collected in Building 883, Room 104 (Individual Hazardous Substance Site [IHSS] ~~104~~ 180).

On August 25, 1993, 54 smears were collected by Radiological Operations during the initial pre-job survey (see Attachment 1 for the map and Attachment 2 for smear results). Four of these 54 smears taken indicated beryllium above the beryllium smear control level of 25 micrograms per square foot (ug/ft^2), as stipulated in the Rocky Flats Plant Beryllium Protection Program, 1-15310-HSP-13.04.

On August 26, 1993, the second pre-job survey was conducted by Radiological Operations. Prior to this survey, the survey grid pattern was altered to include 49 square meter areas instead of 55 (see Attachment 3 for the map and Attachment 4 for smear results). Five of the 49 smears indicated beryllium above the beryllium smear control level.

On September 7, 1993, the post-job smear survey was performed by Radiological Operations. Nine of the 49 smears indicated significantly higher levels of beryllium (see Attachment 5).

Because post-job survey smears indicated beryllium levels above 25 ug/ft^2, building personnel are required to decontaminate the area and re-smear for beryllium. R. T. Stagner, 883 Building Manager, has been notified of these requirements.

If you have any questions regarding this matter, please feel free to call me.

vgm

Attachments:
As Stated

cc w/o Att:
J. M. Brooks Left for JMB
B. M. Clausen
J. G. Kroll

O. McAfee
L. A. Nelowet
D. R. Sweet

EG&G ROCKY FLATS

INTEROFFICE CORRESPONDENCE

DATE: October 5, 1993

TO: R. T. Stagner, 800 Area Operations, Bldg. 881, X5395

FROM: M. D. Schreckengast, Industrial Hygiene, Bldg. T452G, X6790 M.D.S.

SUBJECT: BERYLLIUM SMEAR RESULTS FOR BUILDING 883, ROOM 104 - MDS-012-93

INTRODUCTION:

Within the past few months, Phase I RFI/RI (Resource Conservation and Recovery Act [RCRA] Facility Investigation [RFI]/ Remedial Investigation [RI]) work has begun on the Operable Unit (OU) 15 project. Included in OU 15 is the drum storage area deemed Individual Hazardous Substance Site (IHSS) 180, in Building 881, Room 104. Phase I work involves several activities in each of the IHSSs, including an initial pre-job smear survey, a second pre-job smear survey, hot rinsate sampling, and a post-job smear survey. Because building 883 has been involved with beryllium in the past, all smears were analyzed for beryllium. This letter details those results.

CONCLUSION:

All three smear surveys indicated beryllium levels above the 25 micrograms per square foot ($\mu g/ft^2$) beryllium smear control level. This area must be decontaminated and re-smeared in order to verify beryllium removal.

FINDINGS/DISCUSSION:

On August 25, 1993, Radiological Operations conducted the initial pre-job survey at IHSS 180 in Building 883, Room 104. The area of study was divided into 55 square meters, 1-54 were smeared. Please refer to the map provided in Attachment 1 and the results provided in Attachment 2. After this survey, the grid pattern was altered and 49 square meter areas instead of 55 were identified for sampling.

On August 26, 1993, Radiological Operations conducted the second pre-job survey. Please refer to the map provided in Attachment 3 and the results provided in Attachment 4.

After this survey, hot rinsate sampling was performed by ERM-Rocky Mountain over all 49 identified sample square meter areas. Last, the post-job smear survey was conducted by Radiological Operations on September 7, 1993. Please refer to the results provided in Attachment 5.

The Rocky Flats Plant Beryllium Protection Program, 1-15310-HSP-13.04, establishes 25 $\mu g/ft^2$ as the beryllium smear control level. Four smears from the initial pre-job survey, five from the second pre-job survey, and nine from the post-job survey indicated beryllium levels above the 25 $\mu g/ft^2$ beryllium smear control level. Results from the three surveys are not consistent as to location of contamination. Reasons for these discrepancies may include current building foot traffic spreading/moving contamination, different locations of the 100 square centimeter smear areas inside the square meter areas, etc.

Procedure 1-15310-HSP-13.04 requires that areas having levels above 25 $\mu g/ft^2$ be decontaminated, and then re-smeared and re-counted for beryllium. Please mark the area with tape, barriers, etc., to eliminate spread of the contamination; and arrange for decontamination and another smear survey to verify decontamination.

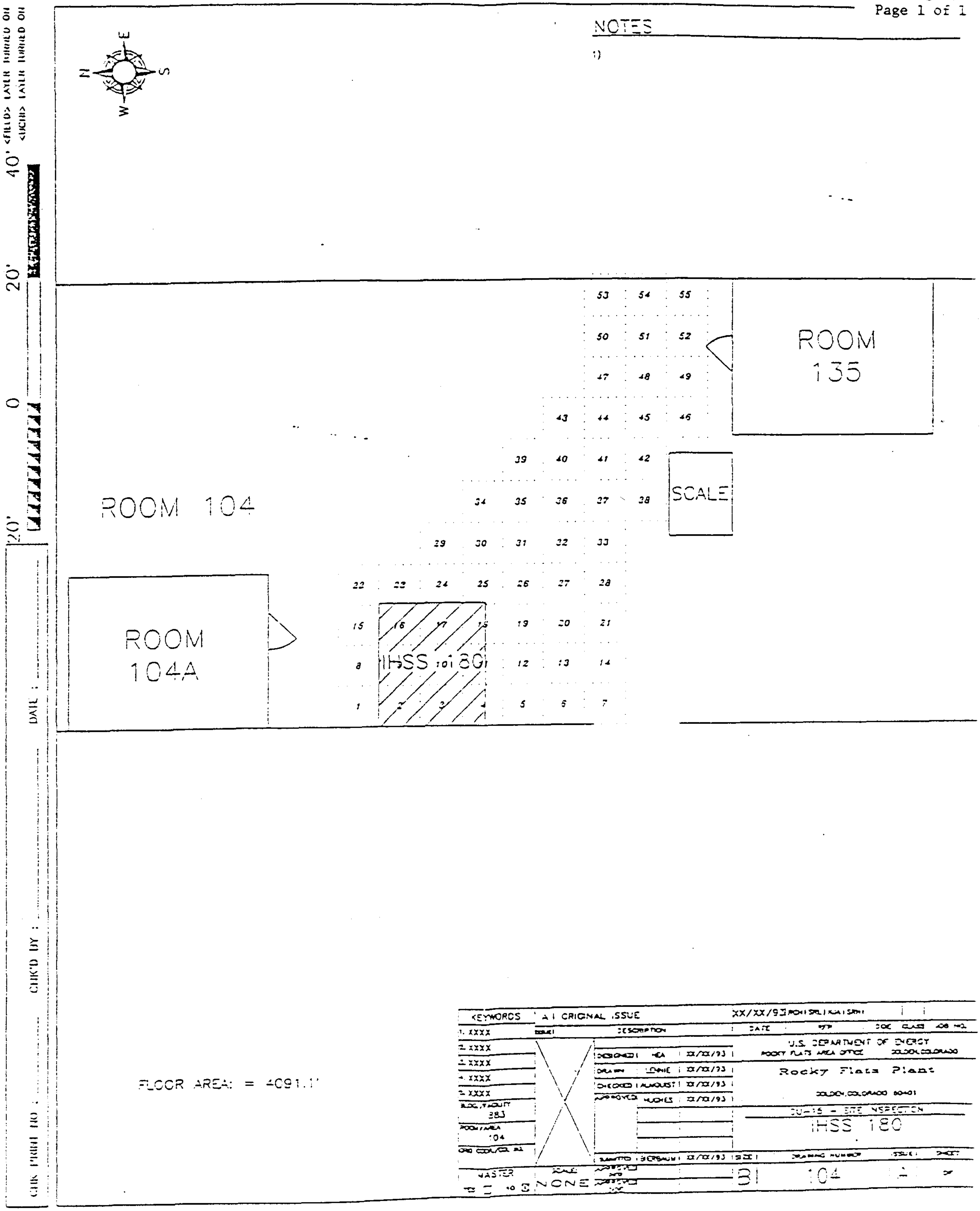
Employees involved in the decontamination must have completed Beryllium Operations Training within the past two years. Personal protective equipment requirements for decontamination include: 1) a half-mask or full-face respirator equipped with high efficiency particulate (HEPA) cartridges, 2) tyvek coveralls worn over whites, and 3) surgeons gloves.

If you have any questions or concerns, please contact me at Extension 6790.

vgm

Attachments:
As Stated

cc w/o Att:
J. M. Brooks
B. M. Clausen
L. A. Holwager
J. G. Kroll
O. McAfee - w/Att
L. A. Nelowet
D. L. Schubbe
D. R. Sweet


NOTES
1)
N
E
S
W
40'
20'
0
20'
ROOM 135
SCALE
ROOM 104
ROOM 104A
IHSS 180
FLOOR AREA: = 4091.1'
KEYWORDS
A ORIGINAL ISSUE
U.S. DEPARTMENT OF ENERGY
Rocky Flats Plant
GOLDEN, COLORADO 80401
IHSS 180
NONE
104
CHK'D BY :
DATE :

PG

☐ AIR SAMPLE
☒ SMEAR SAMPLE
☒ SPECIAL SAMPLE 883, Special

ROCKY FLATS PLANT

BERYLLIUM SAMPLE LOG

Send Results To INDUSTRIAL HYGIENE
X 2780

NAME King / Clausen

Date Collected: 8-25-93

Lab No. 9961

SAMPLE NO.	BLDG.	ROOM	DESCRIPTION	DATE ON	DATE OFF	TIME ON	TIME OFF	ΔT MIN	FLOW RATE	VOL OR AREA	SAMPLE µg	µg/ft² -µg/m³
1	883	104	See attached map	N/A	N/A	N/A	N/A	N/A	N/A	~~N/A~~ 100cm²	<1	<10
2											<1	<10
3											<1	<10
4											<1	<10
5											<1	<10
6											<1	<10
7											<1	<10
8											<1	<10
9											<1	<10
10											<1	<10
11											<1	<10
12											<1	<10
13											<1	<10
14											<1	<10
15											<1	<10
16											<1	<10
17											<1	<10
18											<1	<10
19											<1	<10
20											<1	<10
21											<1	<10
22											<1	<10
23											<1	<10
24											<1	<10
25											<1	<10
26	↓		↓	↓	↓	↓	↓	↓	↓	↓	<1	<10

RF 28990 (9/85) MHS 11-3.2

INDUSTRIAL HYGIENE COPY

Page 1 of 3

Attachment 2
MDS-013-93
Page 1 of 3

☒ SMEAR SAMPLE
☐ SPECIAL SAMPLE 883 Special

ROCKY FLATS PLANT

Send Results To INDUSTRIAL HYGIENE
X 2780

BERYLLIUM SAMPLE LOG

NAME _____

Date Collected: 8-25-93

Lab No. 944

SAMPLE NO.	BLDG.	ROOM	DESCRIPTION	DATE ON	DATE OFF	TIME ON	TIME OFF	ΔT MIN	FLOW RATE	VOL OR AREA	SAMPLE µg	µg/ft² µg/m³
27	883	104	See Attached map	N/A	N/A	N/A	N/A	N/A	N/A	~100cm²	6	56
28											<1	<10
29											<1	<10
30											<1	<10
31											<1	<10
32											<1	<10
33											<1	<10
34											<1	<10
35											<1	<10
36											<1	<10
37											3	28
38			Near the scale								1	10
39											<1	<10
40											<1	<10
41											<1	<10
42			Near the scale								<1	<10
43											10	93
44											10	93
45											<1	<10
46											<1	<10
47											<1	<10
48											2	19
49											<1	<10
50											<1	<10
51											<1	<10
52											<1	<10

RF-28990 (9/85) MHS 11-3.2

INDUSTRIAL HYGIENE COPY

☐ AIR SAMPLE
☑ SMEAR SAMPLE
☑ SPECIAL SAMPLE 883 Special

ROCKY FLATS PLANT

BERYLLIUM SAMPLE LOG

Send Results To INDUSTRIAL HYGIENE
X 2780

NAME Clawson / King

Date Collected: 8-25-93

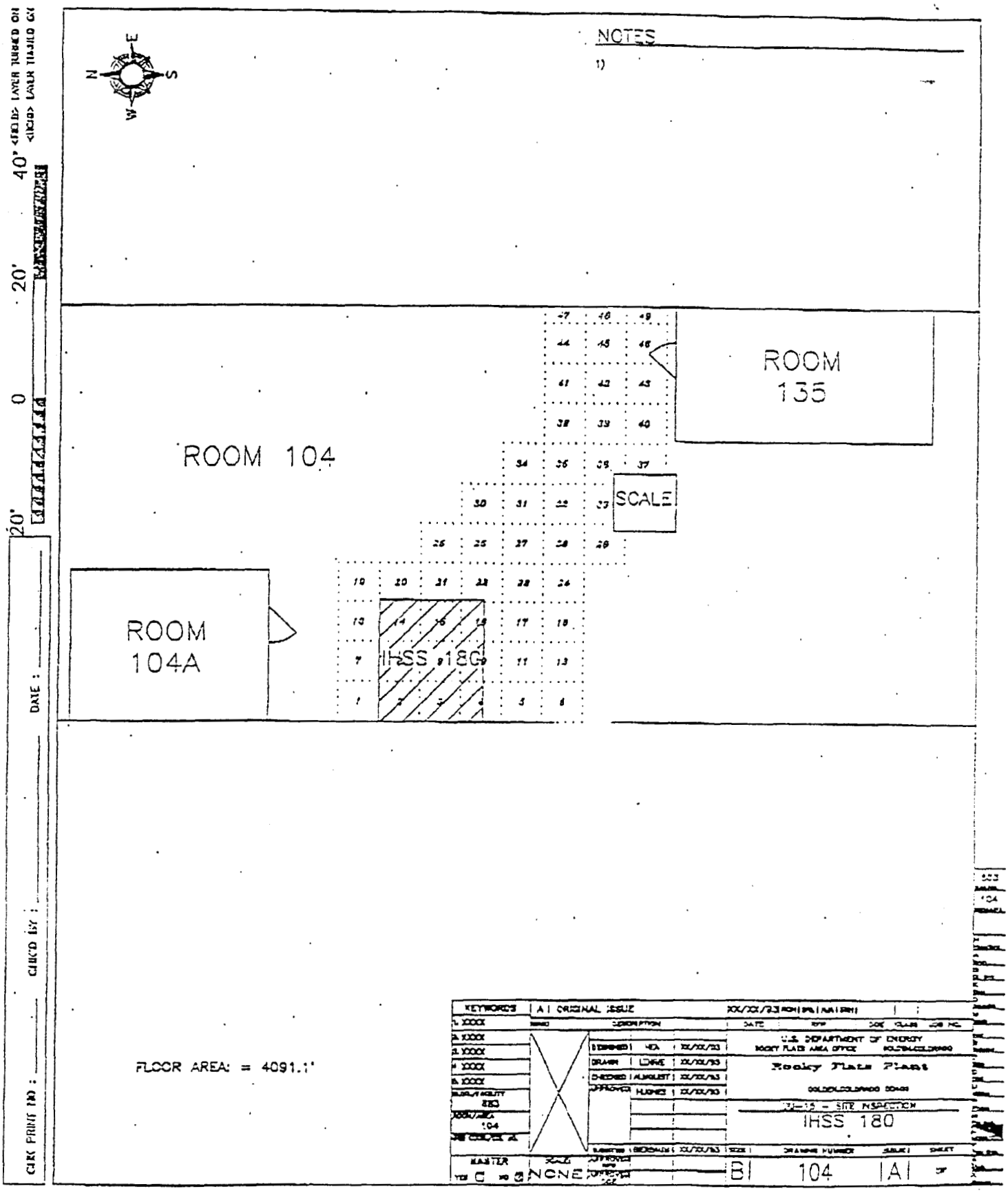
Lab No. 4161

SAMPLE NO.	BLDG.	ROOM	DESCRIPTION	DATE ON	DATE OFF	TIME ON	TIME OFF	ΔT MIN	FLOW RATE	VOL OR AREA	SAMPLE µg	µg/m³
S3	883	104	See attached map	N/A	N/A	N/A	N/A	N/A	N/A	100cm²	<1	<10
S4	883	104	See attached map	N/A	N/A	N/A	N/A	N/A	N/A	100cm²	<1	<10

RF-28990 (9/85) MHS 11-3.2

INDUSTRIAL HYGIENE COPY

Dup #3


NOTES
1)
ROOM 104
ROOM 135
ROOM 104A
SCALE
IHSS 180
FLOOR AREA: = 4091.1'
Rocky Flats Plant
IHSS 180
NONE
104

☐ AIR SAMPLE
☒ SMEAR SAMPLE
☒ SPECIAL SAMPLE 883 Special

ROCKY FLATS PLANT

Send Results To INDUSTRIAL HYGIENE
X 2780

BERYLLIUM SAMPLE LOG

NAME _____

Date Collected: 8-26-93

Lab No. 414

SAMPLE NO.	BLDG.	ROOM	DESCRIPTION	DATE ON	DATE OFF	TIME ON	TIME OFF	ΔT MIN	FLOW RATE	VOL OR AREA	SAMPLE µg	µg/m³
1	883	104	See attached map.	N/A	N/A	N/A	N/A	N/A	N/A	100cm²	<1	<10
2											<1	<10
3											<1	<10
4											1	M.D. 10 9
5											3	280 M.D.
6											<1	<10
7											<1	<10
8											<1	<10
9											<1	<10
10											1	M.D. 10 9
11											<1	<10
12											<1	<10
13											<1	<10
14											<1	<10
15											<1	<10
16											<1	<10
17											<1	<10
18											<1	<10
19											3	280 M.D.
20											1	9
21											<1	<10
22											<1	<10
23											<1	<10
24											<1	<10
25											4	37
26											1	9

Corrected on Be A-51 Chart

RF-28990 (9/85) MHS 11-3 2

INDUSTRIAL HYGIENE COPY

Pg 1 of 7

Attachment 4
MDS-013-93
Page 1 of 2

☑ SMEAR SAMPLE
☑ SPECIAL SAMPLE 883 - Special

ROCKY FLATS PLANT

BERYLLIUM SAMPLE LOG

Send Results To INDUSTRIAL HYGIENE
X 2780

NAME _____

Date Collected: 8-26-93

Lab No. 4144

SAMPLE NO.	BLDG.	ROOM	DESCRIPTION	DATE ON	DATE OFF	TIME ON	TIME OFF	ΔT MIN	FLOW RATE	VOL OR AREA	SAMPLE µg	µg/m³
27	883	104	See attached map	N/A	N/A	N/A	N/A	N/A	N/A	100cm²	<1	<10
28											<1	<10
29											<1	<10
30											<1	<10
31											<1	<10
32											<1	<10
33											<1	<10
34											1	9
35											4	37
36											<1	<10
37											<1	<10
38											<1	<10
39											<1	<10
40											<1	<10
41											<1	<10
42											<1	<10
43											<1	<10
44											14	130
45											<1	<10
46											<1	<10
47											<1	<10
48											1	9
49											<1	<10

RF-28990 (9/85) MHS 11-3.2

INDUSTRIAL HYGIENE COPY

☐ AIR SAMPLE
☐ SMEAR SAMPLE
☐ SPECIAL SAMPLE 883 Taken 9/1/93

ROCKY FLATS PLANT

BERYLLIUM SAMPLE LOG

Send Results To INDUSTRIAL HYGIENE
X 2780

NAME Bernac / Clausen

Date Collected: 9/2/93

Lab No. BeAST

SAMPLE NO.	BLDG.	ROOM	DESCRIPTION	DATE ON	DATE OFF	TIME ON	TIME OFF	ΔT MIN	FLOW RATE	VOL OR AREA	SAMPLE µg	µg/m³
1	883	104	See map. Appendix 3	N/A	N/A	N/A	N/A	N/A	N/A	100cm²	1	9
2											<1	<10
3											<1	<10
4											<1	<10
5											<1	<10
6											<1	<10
7											2	19
8											<1	<10
9											<1	<10
10											<1	<10
11											<1	<10
12											<1	<10
13											<1	<10
14											<1	<10
15											<1	<10
16											<1	<10
17											<1	<10
18											<1	<10
19											<1	<10
20											<1	<10
21											<1	<10
22											3	28
23											<1	<10
24											<1	<10
25											<1	<10
26	883										<1	<10

RF-28990 (9/85) MHS 11-3.2

INDUSTRIAL HYGIENE COPY

Page 1 of 2

Attachment 5
MDS-013-93
Page 1 of 2

☒ SMEAR SAMPLE
☒ SPECIAL SAMPLE 883 Taken 9/1/93

ROCKY FLATS PLANT

BERYLLIUM SAMPLE LOG

Send Results To INDUSTRIAL HYGIENE
X 2780

NAME Bernal / Clausen

Date Collected: 9/2/93

Lab No. Bens

SAMPLE NO.	BLDG.	ROOM	DESCRIPTION	DATE ON	DATE OFF	TIME ON	TIME OFF	ΔT MIN	FLOW RATE	VOL OR AREA	SAMPLE µg	µg/m³
27	883	101	See Map: Appendix 3	N/A	N/A	N/A	N/A	N/A	N/A	100 cm²	<1	<10
28	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	<1	<10
29											<1	<10
30											<1	<10
31											3	28
32											<1	<10
33											23	214
34											2	19
35											8	74
36											6	56
37											<1	<10
38											6	56
39											<1	<10
40											<1	<10
41											2	19
42											<1	<10
43											<1	<10
44											<1	<10
45											<1	<10
46											27	251
47											33	307
48	↓	↓									14	130
49	883										/	9

RF-28990 (9/85) MHS 11-3.2

INDUSTRIAL HYGIENE COPY

Page 2 of 2